

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Roger Buelow et al

Serial No.: 10/797,761

Patent No.:

Filed: March 10, 2004

For: Light Pipe with Side Light Extraction

Attorney Docket No. 2510

Group Art Unit: 2874

Examiner: James Stein

Allowed on:

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Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

REQUEST FOR RECONSIDERATION AFTER FINAL REJECTION

Applicant submits the following remarks in requesting reconsideration of the rejection in the final Office Action dated January 6, 2006.

REMARKS

The present application includes Claims 1-7 and 18-21. Claims 3-7 and 18-31 are allowed. Claims 1-2 stand rejected.

Examiner has rejected Claims 1 and 2 under 35 U.S.C. 103(a) as being unpatentable over admitted prior art, USP 5,579,429 to Naum (hereinafter "Naum"), and further in view of USP 6,714,711 to Lieberman et al. (hereinafter "Lieberman").

As will be shown below, the examiner's rejection fails to state a *prima facie* case of obviousness since the rejection does not show that all claim elements are taught or suggested by the prior art.

To establish a *prima facie* case of obviousness, the examiner must show *inter alia* that all claim limitations are taught or suggested by the prior art. See *CFMT, Inc. v. Yieldup International Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (holding that patent examiner must examine "all the limitations of the claims"); *In re Gulak*, 703 F.2d 1381, 1385 n. 8 (Fed. Cir. 1983) (noting that "[t]he CCPA has considered all of the limitations of the claims * * * in determining whether the invention would have been obvious"); *In re Royka*, 490 F.2d 981, 984, 180 USPQ 580, 583 (Fed. Cir. 1974) (obviousness requires a suggestion of all limitations in a claim).

In more detail, the examiner suggests that it would have been obvious to modify Naum in view of Lieberman so that light scattering material in Naum is distributed with a non-zero density gradient along a longitudinal axis of the light pipe. The examiner states that this combination would be made "in order to achieve *more* uniform side light emission along the entire length of the light pipe." Office Action at 4 (emphasis added).

However, the examiner's proposed combination would not arrive at invention of Claim 1, which includes achieving side light emission that is "uniform" as quantitatively defined in the specification at P. 2, Line 32 – P. 3, Line 2. Lieberman teaches two features for achieving "evenly distributed light." Col. 5, Lines 5 to 21. One feature is to vary the refractive index of the core along the length of a light-emitting device (Col. 5, Lines 9-10); the other is to increase the density of light-scattering centers linearly along the core (Col. 5, lines 11-12). Lieberman teaches these two features in combination with each other, and does not teach or suggest eliminating either of the features. Thus, Lieberman's description in the specification of Fig. 6 refers to increasing, across the core of an optical waveguide, the "refractive index and distribution of scattering centers" (Col. 5, Lines 18-21; emphasis added). The examiner reasons

in effect that, if a person of ordinary skill in the art decides (somehow) to eliminate the variation of refractive index consideration of Lieberman, a resulting light-emitting device would yield illumination that would be “*more*” uniform. Office Action at 4. More “uniform” than what?—is not specified by the examiner.

So, at best, the examiner can only say that illumination would be “more” uniform. This is true because the resulting Naum optical fiber would lack the gradient-in-refractive index feature of Lieberman. In contrast, Claim 1 recites the achieving of “uniform” side light emission, wherein “uniform” is quantitatively defined in the specification as, “the lumen output as between inlet and outlet portions of a side-light emitting section of the light pipe [being] within plus or minus 20 percent of the average value of each other.” Specification at P. 2, Line 32 – P. 3, Line 2. Achieving uniformity in light emission within a specified, quantitative range differs from merely achieving light emission that is *more* uniform than some unspecified value. The difference can be explained with the following analogy:

Claim 1 is like telling a traveler on the USA East Coast that she will arrive within 60 kilometers of Los Angeles in three hours. In contrast, the proposed combination is like telling the traveler that she will be “closer” to Los Angeles in three hours. The difference would be vast to the typical time-conscious traveler. It is not enough just to tell the traveler that she will be “closer” to Los Angeles, since that could merely mean, for instance, that she is still close the East Coast in three hours.

With the examiner’s proposed combination of references failing to teach or suggest the element of Claim 1 of achieving a uniform side-light emission, the rejection fails to state a *prima facie* case of obviousness. See *CFMT, Inc., supra*; *In re Gulak, supra*; and *In re Royka, supra*.

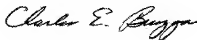
Conclusion

The pending claims should be allowed.

I certify that the foregoing document and any document(s) referenced below are being filed electronically with the USPTO using the private PAIR system on the date stated below.

Dated: April 6, 2006

Respectfully submitted,

A handwritten signature in cursive script, reading "Charles E. Bruzga".

Charles E. Bruzga
Registration No. 28,935
Customer No. 07617